

REMARKS

The Office Action of March 5, 2003 has been received and its contents carefully considered.

Claims 1, 7, 8, 11, and 12 have been rejected under 35 U.S.C. § 102(b) as anticipated by the newly cited U.S. Patent 5,698,210 to Levy.

Applicants submit that Levy does not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

The present invention, as set forth in claim 1, is directed to a solid pesticidal formulation enveloped in a water-soluble substance. The solid pesticidal formulation comprises at least one water soluble hydroxy compound selected from the group consisting of alkanols, ethylene glycol, propylene glycol, tri- or more valent alcohols, alcoholamines, lactic acid and hydroxy fatty acid esters. The solid pesticidal formulation is a formulation selected from wettable powders, water dispersible granules and water soluble formulations.

The patent to Levy is directed to controlled delivery or controlled release composition and process for treating organisms in a column of water or on land.

Levy discloses a wide variety of controlled release compositions, and describes a variety of components that can be present in a controlled release composition, but Levy nowhere discloses any examples of a solid pesticidal formulation enveloped in a water soluble substance, where the solid pesticidal formulation comprises at least one water soluble hydroxy compound selected from the compounds set forth in claim 1, and where the solid pesticidal formulation is a

formulation selected from wettable powders, water dispersible granules and water soluble formulations.

In the Office Action, the Examiner identifies various portions of Levy on which he relies to support the rejection. Applicants discuss below the various portions of Levy on which the Examiner has relied.

The Examiner relies on the disclosure of Levy at column 10, lines 12 to 53, and especially the fatty alcohols or acids or fatty alcohol esters of fatty acids (glycolic), disclosed at column 10, lines 23 to 25.

Levy discloses at column 10, lines 12-53, various materials that can be used as “coatings”, and states that they can be water-soluble, or water insoluble and biodegradable or erodible. Levy then names a number of materials, including fatty alcohol esters of fatty acids. The description of “coatings” in column 10, lines 12 to 53, however, refers to a coating on the surface of a solid formulation by a water-soluble or insoluble material for providing a controlled release composition. It does not mean an “enveloped” formulation according to the present invention.

The Examiner also relies on the disclosure at column 15, lines 54 and 56, of Levy of water soluble alcohols such as 2-propanol and 2-ethylhexanol. Applicants point out, however, that there is no disclosure in Levy of the use of these compounds in a solid pesticidal formulation that is enveloped with a water-soluble substance.

In addition, the Examiner relies on Example 4 of Levy, and its disclosure of the use of PVA, which the Examiner asserts is a multivalent alcohol. In Example 4, Levy discloses the use

of a water soluble polyvinyl alcohol film which has the joint function of a carrier and a coating to make a solid mass. This solid mass was stored in a zip lock bag. In use, cubettes were sectioned from the agglomerated mass.

Applicants point out, however, that in Example 4, PVA is dissolved in water and is used to provide an agglomerated composition comprised of the water-soluble PVA and B₁ bioactive agent. The PVA in Example 4 is not used for enveloping as in the present invention.

Further, as applicants have argued in prior responses, PVA does not satisfy the requirements of a tri- or more valent alcohol. See the Response Under 37 C.F.R. § 1.111 filed on July 25, 2001 and the Response Under 37 C.F.R. § 1.111, filed on November 21, 2001.

Applicants further note that they have added a new claim 13 which does not include PVA as a water-soluble hydroxy compound.

The Examiner also apparently relies on the disclosure in Example 4 of a zip-lock bag to satisfy the requirement of an envelope. Example 4, however, does not disclose the material that is used to make the zip-lock bag. The term "zip-lock" does not indicate that the bag is water-soluble. In fact, as far as applicants are aware, a zip-lock bag is a water-insoluble bag.

The Examiner also relies on Example 5 of Levy and its disclosure of "acetyl" alcohol.

With respect to the "acetyl-alcohol" in Example 5 of Levy, applicants submit that the reference to "acetyl alcohol" is a mistake. Applicants have not been able to find a compound known as "acetyl alcohol" in various dictionaries that they consulted, and are not aware of the structure of "acetyl alcohol". Applicants believe the reference to "acetyl alcohol" at column 23,

line 36, is a mistake because the remaining portions of Example 5 only refer to “cety alcohol.” Cetyl alcohol is a C₁₆ alkanol described at column 10, line 36 of Levy and is water insoluble.

The Examiner also relies on the disclosure at column 11, lines 49-55, of water soluble PVA pouches and packets. Although PVA film is disclosed in column 11, lines 49 to 55, a typical example in Levy shows that the PVA is used for dissolving in water. See, for example, Example 4, especially column 21, lines 41 to 43, where Levy states that in preparing the controlled delivery system, the PVA film was dissolved in water.

In view of the above, applicants submit that Levy does not defeat the patentability of the present claims and, accordingly, request withdrawal of this rejection.

Claims 1, 3, 5, 7, 8, 11 and 12 have been rejected under 35 U.S.C. § 102(b) as anticipated by the newly cited U.S. patent 5,639,465 to Huang et al.

Applicants submit that Huang et al do not disclose or suggest the presently claimed invention and, accordingly, request withdrawal of this rejection.

The Examiner states that Huang et al disclose a pesticide solid water dispersible granule that is “sprayed with enveloping hydroxy water soluble PVA”, and which contains dipropylene glycol of 1 to 24%, as disclosed col. 2, lines 3-34, or ethylene glycol as disclosed in col. 1 in the Summary of the Invention.

The Huang et al patent discloses a granular pesticidal composition that contains 10 to 20% by weight of a pesticide, and a component selected from (i) one or more of ethylene glycol, diethylene glycol, propylene glycol or dipropylene glycol, or (ii) polyvinyl alcohol, and the remainder comprising kaolin or montmorillonite clay.

The Huang et al patent, however, does not disclose the use of an envelope. Although the Examiner states in this rejection that Huang et al disclose spraying with an “enveloping hydroxy water soluble PVA”, the Huang et al patent does not employ the word “envelope” or “enveloping”. In fact, as the Examiner admits in the very next rejection of the claims, discussed in detail below, Huang et al “does not use the word enveloped”.

Thus, the polyvinyl alcohol that is employed in the Huang et al patent is part of the solid pesticidal formulation, and is not employed to envelope a solid pesticidal formulation that contains a water soluble hydroxy compound selected from the compounds set forth in the present claims.

Further, as discussed above, PVA does not satisfy the requirement of the water soluble hydroxy compound.

In view of the above, applicants submit that Huang et al do not anticipate the present claims and, accordingly, request withdrawal of this rejection.

Claims 1, 3, 5, 7, 8, 11 and 12 have been rejected under 35 U.S.C. § 103(a) as obvious over Huang et al in view of the newly cited U.S. Patent 4,544,693 to Surgant.

In this rejection, the Examiner recognizes that Huang et al do not specifically employ the term “envelope” to describe their composition. The Examiner argues, however, that Surgant teaches the desirability of limiting the exposure of a user of an agricultural composition to the agricultural chemicals and dust, to provide for ease of storage and handling, and to prevent or avoid the problem of dust which may be irritating and/or toxic to the user, by employing a cold

water-soluble packaging film to package agriculture chemicals which are in granule or dust form.

The cold water soluble package film in Huang et al can be made from polyvinyl alcohol.

The Examiner argues that it would have been obvious to employ the granular pesticidal compositions of Huang et al in a water soluble envelope such as disclosed in Surgant.

In response, applicants point out that Huang et al relate to a formulation suitable for aerial application, whereas Surgant relates to an improvement in a water-soluble film. Applicants submit that one of ordinary skill in the art would not have had any motivation to combine the teachings of these two references, and that any such combination could only result from hindsight after reviewing the present application.

Further, as set forth in the present specification at page 1, solid formulations that are enveloped in a water soluble polymer film were known in the prior art, but these enveloped formulations were not sufficiently stable because the envelope material may degenerate while they are preserved for a long time and may be broken while preserved or transported. Applicants submit that it was not expected at the time of the present invention that the addition of the specific hydroxy compounds set forth in the present claims to solid formulations would give stability to the film envelope. The present invention solves the stability problem by the addition of the specific hydroxy compounds to solid formulations, not by improving the film envelope itself. Thus, the improved film of Surgant is irrelevant to the present invention.

In view of the above, applicants submit that Huang et al and Surgant do not defeat the patentability of the presently claimed invention and, accordingly, request withdrawal of this rejection.


Response Under 37 C.F.R. § 1.111
U.S. Application No.: Q57694

Q57694

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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